The Passing Lane

A BULLETIN OF TRANSPORTATION INFORMATION TECHNOLOGY
from the Washingon State County Road Administration Board (CRAB)

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SLOWER TRAFFIC MAY USE SHOULDER TO PERMIT PASSING

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The Passing Lane is a publication of the Washington State County Road Administration Board. Unauthorized distribution is strictly forbidden unless accompanied by boisterous praise for the below mentioned staff. Please call **(206)753-5989** if you would like more information regarding this newsletter or would like a free lifetime subscription. Our electronic bulletin board may be reached at **(206)664-0946**, N81.

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🐧 CRAB Conferences for Roadies

The CRAB is sponsoring two exciting conferences this fall as part of its ongoing support efforts. The first is a new, one day program designed for county design staff called the **CRAB Road Engineering Forum**. It will be held on October 31, 1994. The objective of this event is to provide a forum for the presentation and discussion of topics of current interest in road design. The program for the forum is being developed in cooperation with the UW Transpeed program and WSDOT TransAid (formerly Local Programs). Some topics under consideration involve CAD, construction recycling, professional licensing and liability, and environmental permitting. If you are involved in design or design support with a Washington county, you should consider attending this event. It's also a great way to meet your counterparts in the other counties!

The Fifth Washington CEAL User's Conference will be held immediately following the Engineering Forum on November 1 and 2. This will likely be the most exciting conference yet, with participation from the counties, WSDOT, the US Bureau of Indian Affairs, and consultants. Look for the latest from CLM, including version 7.0 and DPMI CEAL.

Look for more details about both of these events in the next issue of the Passing Lane. But mark your calendars now! CRAB staff, in cooperation with other participating organizations, will be developing the final agenda. If you responded to a CRAB questionnaire earlier this year about these events, thanks for your contribution. If you want more information about what will be covered or have ideas to share, please give John Donahue at the CRAB a call.
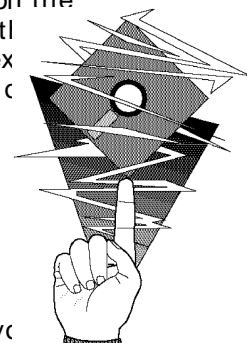
🐧 Driving Disk Crazy

Installing CEAL 6.9x on a drive different than C: ? You may have correctly answered all of the prompts during installation, but there's still a bit more to do. The thing is that the DOS extender code built into several of the CEAL executables, including the XCEAL.EXE file, is hardwired to do its swapping to C:. Therefore, if you have little or no room on C:, or none at all (attention diskless network stations), then you need to change that setting. This is done in a batch file called CFIGIT.BAT. Go to the XCEAL\EXE directory to find it. You need to start by editing this batch. You will probably see the word XCEAL in the second field on the first line of this batch. Change *XCEAL* to *%1*. This is called a replaceable parameter that will grab a text string off the command line and shoot it into this position. Next, change the that says *C:* to the drive and directory of your choice, for example *Q:\DATAMAX\SWAPZONE*. Now let's run this batch DOS extender executables using the following syntax :

CFIGIT *fname*

Where *fname* is among the following: XCEAL, SETUP, CPCKV4CM, CPCS4CM, DIFCLM, DISCUTB, IDNCLMB, REFORM2, REFORM4, TRI, TRI32, TRIQNTB

So go ahead and run CFIGIT for each of these files. When you done, CEAL swaps where you want it to.
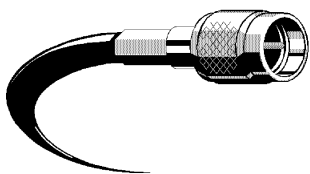
🦀 Exploring the Internet

"The Internet is the world's largest computer network", and is synonymous with **The Information Superhighway**. At the beginning of last year there were an estimated 1.2 million computers connected to this vast array of wires. You may be connected to the Internet and not even know it. While a lot of what you hear regarding the Internet should be considered hype, there is a wide variety of available on-line resources relevant to transportation. We have just started exploring "the net" and plan to share what we find.

Al Gore has one why can't I?[1]

Our first step in this journey is to implement Email at CRAB. While eliminating some yelling to adjacent cubicles, we hope to avail our Emailboxes to the rest of the world via the Internet. Within two months we should be publishing Internet addresses for everyone at CRAB. We hope this will ease us into a world of decreasing telephone tag and free communication with counties and other government entities. We are also learning a lot about how a small agency can connect to the Internet in a cost-effective manner. We will certainly share what we learn in this endeavor.

We also see the use of our electronic bulletin board as a stepping stone to the future. It is one electronic forum that we do have some control over, and it should be fairly easy for you to access. At this time, we are working towards making the BBS the medium of choice for software updates and data transfer.

[1]Al Gore can be reached at vice-president@whitehouse.gov.

🐟 Exploring the Database Frontier

CRAB has used a database development tool called Advanced Revelation® (AREV) or its predecessor since 1985. While we have been very successful with this platform we occasionaly wonder what tool(s) we would use if we were starting over today. The trend toward graphical user environments, like Microsoft Windows™, is obvious and is hard to ignore when trying to support a software product.

CRIS is a substantial and complex system and migration to any new environment is not a trivial task. However, there are many opportunities associated with some of the newer database tools. Data is becoming more portable and specialized tools are providing more seamless access to that data. We are certainly monitoring the progress of mapping and Geographical Information system (GIS) tools when we consider a possible rewrite of CRIS.

At this time, we have no definite plan or timeline for the migration of CRIS to a new database environment. We do see the development of CRIS in some windows product as inevitable and the design changes we've been committed to won't be as disruptive to users when melded into a migration process. Our investigation of possible tools includes Revelation Technologies Inc.'s Open Insight, Microsoft® Access, and PowerBuilder by Powersoft Corporation. As always, we welcome your input and will keep you informed of any pending decisions that might have and impact on the way you do business.
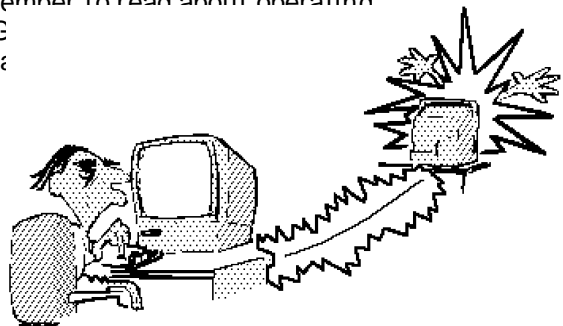
🧍 CEAL for PC networks

Getting CEAL to work on your network, where multiple users share files, requires some knowledge about where CEAL trys to create user specific files during execution. These "private" directories (CTQ, DATA, PROMPT, SCR, and SPD) should be located underneath the user's current directory when starting CEAL. The other, "shareable" directories (COGOLIB, EXE, and HELP), are made available to CEAL using the DOS SET command. Special note for keeners: The CEAL installation manual 20.350 calls the SPD directory sharable. Experience at Skagit County suggests that CEAL is trying to write here while executing ICOGO. John Maring at CLM says that if this is true, the problem will be corrected in a future release.

For virtual memory swapping, there's a couple of approaches available. If one or more users on the network do not have a fixed disk, then you might decide to have all the users on the network swap to the same network directory. Edit CFIGIT.BAT (see above) and delete the field *-SWN SWXCEAL.CLM*, and replace the field after *-SWD* with the drive and path to your favorite swapping zone. This will cause unique swap files to be created by each user in this directory. Network administrators note: for those of you familiar with Autocad, you know that ungracious exits from your virtual memory application (crashes) will leave these swap files stranded like so many Orca's at a beach party. Swap areas should to be scrubbed regularly to reduce unnecessary disk clogging.

Now, if all of the CEAL users on your network have a C: drive with at least 10MB free, then why not swap locally by keeping the -SWD directory at C:\ and -SWN at SWXCEAL.CLM in CFIGIT.BAT. This will save on network traffic and speed up everbody's CEAL ride. Remember to read about operating CFIG to ma
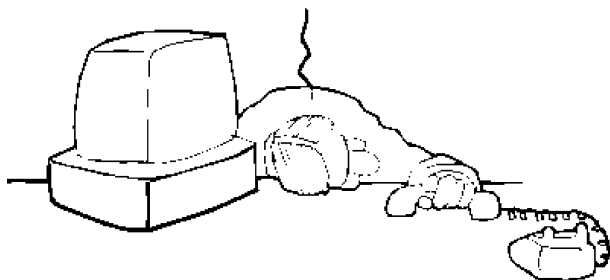
Getting picky about PCI

The (fairly) new Pentium chip from Intel has been accompanied by a replacement for the ISA expansion bus specification called PCI. The 64 bit PCI bus currently supports the newest, hottest peripherals now available on the PC. Include on this list of PC goodies graphics cards from all of your favorite manufacturers. Don't miss out on performance improvements available with these cards, but if you're interested in enhanced graphics in CEAL, you may want to consider how the card can be configured. For example, most of these cards come equiped with their own VGA graphics section. If you like dual screen graphics in CEAL, make sure that you can disable the VGA section so you can use a second VGA card to drive your text monitor. One card WSDOT has tested for this arrangement is the Matrox PCI Graphics card. If you want to run a monochrome card, however, be sure the card you buy has that ability. For example, WSDOT has tested another card, the ATI 64 bit PCI card, which works with a monochrome card, but you can't disable VGA. Most of these cards support the VESA SVGA standard, so they can take advantage of that CEAL driver (to run CEAL in SVGA, you need a Logitech mouse driver instead of Microsoft). And if you want to run CEAL using 8514/a graphics, you have to ask for that by name.
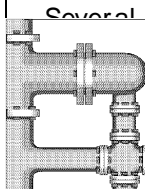
Would You Like to Work at the CRAB?

The CRAB will soon be advertising for help in our information services section. These will be permanant jobs with salaries ranging from $2596-$3668 per month. The jobs involve supporting county public works staff in implementing the CRIS and CEAL programs. This is an exciting opportunity for someone to work with a wide variety of individuals and organizations. If you are a self-starter, mammal, comfortable with computer databases, enjoy working with other mammals, and don't like to do the same thing day in and day out, this is the job for you.

Why be shy? Persons with experience in Washington counties are especially encouraged to consider these fine opportunities. Phone Steve or Gene at the CRAB and tell us if you're interested. We'll give you more detailed information about the jobs and insure that you get the proper application materials when they become available. Remember, Olympia is a great place to live, work, and bike, and it's only 25 minutes from downtown Bucoda by camel.

Pipe design joins great beyond

Several of you have phoned the CRAB about why CEAL command 4.706 - Pipe Design doesn't seem to work. The word from CLM is that the code for this command has been discarded. If you still have this command page in your manual, you should remove it to make room for new stuff coming in CEAL 7.0.

PKZIP® Primer

Although we keep getting larger and larger hard disks, it seems we have no trouble keeping them full. Luckily, there are several good file compression utilities that allow us to free up some of that valuable disk space for our ever expanding wallpaper collection.

One of the most popular compression utilities is PKZIP from PKWARE, Inc. CRIS includes a registered copy of PKZIP. We make liberal use of this utility during software updates, roadlog submissions, accident data publishing, etc. While these programs should be considered part of CRIS, you may find them useful to backup data or transfer files from machine to machine using the old diskette based "sneaker-net".

PKZIP.EXE is the file compression program and PKUNZIP.EXE is the file uncompression program. Both are installed in your AREV\ subdirectory. You can get a lot of help with these routines by simply running them without any parameters.

C:\AREV>**pkzip**

This will give you a brief explanation of the correct syntax for the pkzip command. Here are some examples for using pkzip/pkunzip to do some real work. (NOTE: These example assume you have a valid path to the pkzip commands.)

C:\AREV\CRIS\ACCIDENT>**pkzip accback**

The above command will compress all of the files in the C:\AREV\CRIS\ACCIDENT directory and store them in one file called ACCBACK.ZIP. This file could then be copied to a diskette (if it is small enough) and used for backup purposes. You could also copy the file to another machine or drive and uncompress it for use in that location.

D:\AREV\CRIS\ACCIDENT>**pkunzip accback**

This would uncompress ACCBACK.ZIP and create all of the original accident files in the current directory. I often move entire CRIS systems from computer to computer using pkzip tools.

C:\AREV>**pkzip -p -r cris**

This command will create a file called CRIS.ZIP. This file will include all files and the entire directory structure in C:\AREV. The **-p** option tells pkzip to store pathnames and the **-r** option enables pkzip to work

through all subdirectories. After I move this file (CRIS.ZIP) to another machine, I will use pkunzip and the **-d** option to uncompress the files and recreate all of the subdirectories I stored in the archive.

D:\AREV>**pkunzip -d cris**

Pkzip and pkunzip are simple tools and extremely useful. If you are interested in learning more about the advanced functions of these utilities you may download the latest shareware version of the program along with a more verbose version of the documentation. Call the CRAB BBS at (206)664-0946. Oh, and use your computer to make the call. The noises you will hear with your voice phone will not be enlightening.

CEAL 6.94 Incremental Update

CEAL 6.91 has been one of the most successful releases of CEAL in recent memory, containing very few inconsitancies (aka bugs). CLM has issued an interim release which addresses certain problems experienced by users of 6.91 over the past 6 months. If you are a Washington county and think that you are experiencing any of the problems described below, you should call CRAB to find out about this incremental upgrade. If you don't think these bugs or enhncements affect you or the way you work with CEAL, then there is no reason to upgrade. Hold on tight for 7.0, due out later this year. The following are highlights about the 6.94 fix:

2.270 Prompts - Fixed GOTO end of program.

2.577 DSpiral - Corrected problem with dividing partial spiral.

3.164 PFile GRaph - Fixed problem with the new SHEET prompt appearing on the graphics screen instead of the text screen.

3.860 Plot SECtion/ENDarea - Corrected calculation of the placement of 3D chains.

4.486 DESign File EXecute - Corrected ditch and match profile elevations for those with associated chains. CEAL was getting elevation of profiles at current station of section baseline instead of the location of profile intersection with section.

4.736 Display LIMits RQR - Corrected tabulation of incremental cut/fill volumes.

4.942 VOLume between DTM's - Fixed.

There are other, minor problems that have been addressed. If you're a Washington county and you're having a problem getting CEAL to do what you want it to do, be sure and phone the CRAB so we can check with CLM to see if you've hit a bug.

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